# THE STATUS OF *GYMNOSOMA ROTUNDATUM* (L.) (DIPTERA, TACHINIDAE) IN SOUTHERN ENGLAND

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*Gymnosoma rotundatum* is a distinctive fly which has a black thorax with golden pubescence on the pronotum and humeri, a bright pink abdomen with black markings, and which is free of long hairs and spines. It is illustrated in Colyer & Hammond (1951, 1968) who say that "it is generally considered to be rare, although we have found it in numbers . . . in more than one locality in Surrey". Since then, there seems to have been little change in its recorded distribution; there have been a scatter of records from Sussex, Kent and Surrey in recent years (Belshaw, 1993); van Emden (1954) also reports records from Hampstead, north London, and data available to Falk (1991) suggested that this species was sufficiently rare to merit Red Data Book 3 (RDB3) status.

The earliest records that I am aware of are a specimen from Abbots Wood, Sussex, on 11.viii.1872 (Wainwright; specimen in the Natural History Museum, London) and one from Guestling near Hastings in 1877 (Bloomfield). The next is a specimen from Bookham Common, Surrey on 13.vii.1927 by C. N. Colyer followed by records from a small number of localities in Surrey in the 1940s and 50s. There are slightly more records for the period 1960 to 1980, mainly from West Sussex by Mr A. W. Jones, with a considerable increase in available records from 1985 onwards. The majority of the records are from the late 1980s and early 1990s, coinciding with my own interest in recording, but also including many further records by Messrs Mike Edwards, Peter Hodge and A. W. Jones.

The dramatic rise in the numbers of records in the 1980s and 90s (Table 1) seems to suggest that *G. rotundatum* has increased in frequency, possibly associated with the spell of hot summers over the past ten years, but as this also coincides with a period of far more intensive recording than in previous decades, it is likely that the increase in

Table 1. Frequency of records of *Gymnosoma rotundatum* in 10-year sequences since 1870.

| Decade | Records |
|---|---|
| 1870–1879 | 2 |
| 1880–1889 | 0 |
| 1890–1899 | 0 |
| 1900–1909 | 0 |
| 1910–1919 | 0 |
| 1920–1929 | 1 |
| 1930–1939 | 0 |
| 1940–1949 | 1 |
| 1950–1959 | 3 |
| 1960–1969 | 3 |
| 1970–1979 | 11 |
| 1980–1989 | 24 |
| 1990–1996 | 38 |

Table 2. Frequency of records of *Gymnosoma rotundatum* related to time of year.

| "Fortnight" | Records |
|---|---|
| 1–15 May | 2 |
| 16–31 May | 1 |
| 1–15 June | 3 |
| 16–30 June | 3 |
| 1–15 July | 3 |
| 16–31 July | 25 |
| 1–15 August | 15 |
| 16–31 August | 22 |
| 1–15 September | 2 |
| 16–30 September | 0 |
| 1–15 October | 1 |

records is simply a factor of recorder effort. This tends to be confirmed by anecdotal comments from Mike Edwards in West Sussex who reports that *G. rotundatum* "has always been easy to find around here—going back into the early 1970s" (pers. comm.).

The distribution of *G. rotundatum* is seemingly confined to a narrow corridor from the West Sussex coast through Surrey and parts of North Hampshire, with odd outlying records to the east and north (Fig. 1). This narrow band of distribution is mirrored within my main area of search, Surrey (Figure 2). Single individuals are usually encountered, but it is not uncommon to find numerous specimens at a single site.

Overall, I am aware of 87 records of this species from around seventy localities, including numerous records for Rewell Wood, West Sussex, and several from Bookham Common, Surrey. There are records from at least 19 post-1980 10-km squares, thus suggesting that it is actually a great deal commoner than previously supposed. *Gymnosoma rotundatum* appears to have no clear habitat preferences in terms of either geology or vegetation type. Those records where the geology can be confidently ascribed show the following breakdown and provide no obvious indication of an association with a particular soil type, although sand (22 records) seems to be better represented than clay (10) and chalk (12).

These data seem to suggest that *G. rotundatum* is most commonly associated with hot sandy sites, especially heathland and scrubby sites on sand and chalk. Adults visit a wide range of flowers, especially umbellifers such as hogweed *Heracleum sphondylium*, hedge parsley *Torilis japonica* and wild parsnip *Pastinaca sativa*. Often they can be found flying amongst ruderal vegetation such as *Polygonum persicaria* and this helps to confirm a preference for hot dry places. They are most frequent in July and August, but as can be seen from Table 2, the flight period ranges from May to October.

The host of *Gymnosoma rotundatum* in Britain appears to be unknown. Belshaw (1993) indicates that eggs are attached to adult pentatomid bugs of the genus *Palomena*, but there seem to be no breeding records for the species in Britain. On the Continent, *G. rotundatum* certainly occurs considerably further north than in Britain and I found this fly to be widespread in parts of western Russia and Belarussia in 1995 at a latitude similar to Edinburgh.

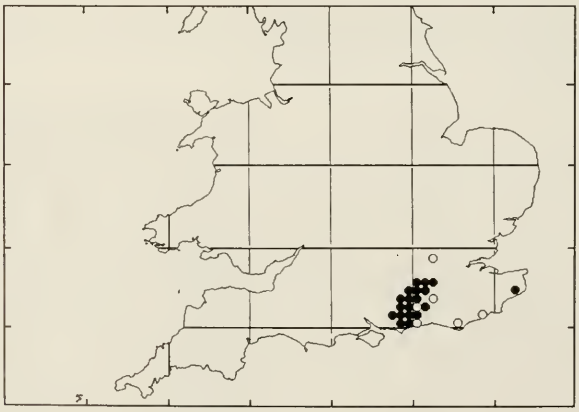

Fig. 1. The distribution of *Gymnosoma rotundatum* in Britain. Shaded circles represent post-1980 records, open circles represent pre-1980 records.

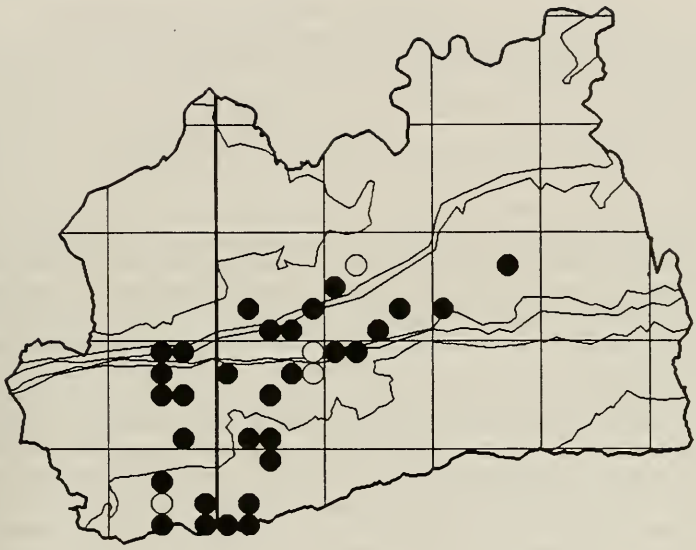

Fig. 2. The distribution of *Gymnosoma rotundatum* in Surrey. Shaded circles represent post-1980 records, open circles represent pre-1980 records.

This striking fly is likely to be found by hoverfly specialists and casual collectors who examine umbellifer flowers, and should be borne in mind as a species worthy of retention. I would welcome further records in order that the distribution or possible spread of *G. rotundatum* can be monitored.

## Acknowledgements

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